#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property Organization International Bureau



# TOTAL CHILDREN BOTH ON THE CONTROL OF THE CONTROL O

(43) International Publication Date 3 June 2004 (03.06.2004)

## (10) International Publication Number WO 2004/045491 A3

(51) International Patent Classification7: A01N 43/04, C07H 21/04, A61K 31/07 C12Q 1/68,

(21) International Application Number:

PCT/IL2003/000957

(22) International Filing Date:

12 November 2003 (12.11.2003)

(25) Filing Language:

English

(26) Publication Language:

**English** 

(30) Priority Data: 60/426,876

18 November 2002 (18.11.2002) US

- (71) Applicant (for all designated States except US): YISSUM RESEARCH DEVELOPMENT COMPANY OF THE HEBREW UNIVERSITY OF JERUSALEM [IL/IL]; Hi Tech Park, The Edmond J. Safra Campus, The Hebrew University of Jerusalem, Givat Ram, 91390 Jerusalem (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SHIR, Alexei [IL/IL]; 13/309 Guatemala Street, 96704 Jerusalem (IL). LEVITZKI, Alexander [IL/IL]; 11/6 Burla Street, 94713 Jerusalem (IL).
- (74) Agent: G. E. EHRLICH (1995) LTD.; 11 Menachem Begin Street, 52521 Ramat Gan (IL).

- (81) Designated States (national): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, EG, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 8 July 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: TARGETED DOUBLE STRANDED RNA MEDIATED CELL KILLING

(57) Abstract: A method of killing a specific target cell/tissue is disclosed. The method comprises exposing the specific target cell/tissue to a composition-of-matter comprising a double stranded RNA molecule associated with a targeting moiety selected capable of targeting to the specific target cell/tissue, thereby killing the specific target cell/tissue.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL03/00957

A. CLASSIFICATION OF SUBJECT MATTER  IPC(7) : C12Q 1/68; A01N 43/04; C07H 21/04; A61K 31/07  US CL : 435/6, 325, 375, 91.1; 536/24.5, 23.1, 24.3, 514/44  According to International Patent Classification (IPC) or to both national classification and IPC  B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by classification symbols) U.S.: 435/6, 325, 375, 91.1; 536/24.5, 23.1, 24.3, 514/44				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.	
Х — Y	FRIS et al. DNA/polyethylenimine transfection particles: Influence of ligands, ymer size, and PEGylation on internatization and gene expression. AAPS PharmSci, D1, Vol. 3(3) article 21, pages 1-11.		1-71	
Y	SOSNOWSKI et al. Targeting DNA to cells with be	Targeting DNA to cells with basic fibroblast growth factor (FGF2).		
Y	Journal of Biological Chemistry, 1996 Vol. 271, No. 52, pp. 33647-33653.  XU et al. The contribution of poly-L-lysine, epidermal grwoth factor and streptavidin to EGF/PLL/DNA polyplex formation. Gene Therapy, 1998 Vol. 5:1235-1243.		1-71	
Further documents are listed in the continuation of Box C. See patent family annex.				
* Special categories of cited documents:  "A" document defining the general state of the art which is not considered to		later document published after the in priority date and not in conflict with understand the principle or theory u	the application but cited to	
	rticular relevance  pplication or patent published on or after the international filing	"X" document of particular relevance; the considered novel or cannot be consistep when the document is taken alo	dered to involve an inventive	
	nt which may throw doubts on priority claim(s) or which is cited ish the publication date of another citation or other special reason (fied)	document of particular relevance; the considered to involve an inventive examples with one or more other successful peing obvious to a pen	itep when the document is ich documents, such	
"O" documer	at referring to an oral disclosure, use, exhibition or other means	"&" document member of the same pater	nt family	
"P" document published prior to the international filing date but later than the				
Date of the actual completion of the international search		Date of mailing of the international search report  1 JUN 2004		
23 March 2004 (25.05.2004)		Authorized officer	11 .	
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450		Terra C. Gibbs Alla Solins for		
Ale	exandria, Virginia 22313-1450	Telephone No. (571) 272-0564		
Facsimile No. (703) 305-3230  Form PCT/ISA/210 (second sheet) (July 1998)				

INTERNATIONAL SEARCH REPORT	PCT/IL03/00957			
Continuation of B. FIELDS SEARCHED Item 3: EmBase, CaPlus, Medline, WEST search terms: double-stranded RNA, dsRNA, epidermal growth factor, EGF				
·				
·				
·	•			